DOCUMENT RESUME

ED 344 884 SP 033 803

AUTHOR Burger, David L.
TITLE The Importance of Living in the Case.
PUB DATE Feb 92
NOTE 49p.; Paper presented at the Annual Meeting of the American Association of Colleges for Teacher Education (San Antonio, TX, February 25-28, 1992).
PUB TYPE Speeches/Conference Papers (150) -- Reports - Descriptive (141)

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS *Experiential Learning; Higher Education; *Learner Controlled Instruction; Learning Processes; *Learning Theories; *Outcomes of Education; Student Role; Teacher Role; Teaching Methods; *Theory Practice Relationship
IDENTIFIERS *Case Method (Teaching Technique); Embedded Case Studies; Empirical Research; *Problem Oriented Instruction

ABSTRACT

A multiple, embedded case study research design was employed to describe and explain the case method pedagogy used by two veteran practioners. The units of analysis were two graduate courses, one a teacher ethics course and the other a business policy course. Information was gathered utilizing precourse and postcourse interviews and a questionnaire administered upon completion. The study found that the goal of practical wisdom was achieved when students and teachers were engaged in "living-in-the case," an experiential process described as "conversation with reality." When students were induced into the intersection of theory and practice, of intellectual and emotional experience, of intrinsic and extrinsic motivators, effective learning and retention took place. Alternative explanations, such as teacher charisma, quality of case writing, and student ability, did not discount the finding of living in the case. Results also suggest that practitioners interested in demonstrating best practices in teacher education with case method pedagogy need to consider an emphasis on induction into the case. This focus has proved to be effective in spite of teaching style, quantity or quality of cases, or student background. (LL)

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The Importance of Living In The Case

David L. Burger, Ph.D.
370 Lilac Circle
Louisville, Colorado 80027

Regis University, Denver

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Paper presented at the annual conference of the American Association of Colleges for Teacher Education, San Antonio, Texas, February 1992.

Dr. Burger is the president of *The Burger Concinnity Group*, an organizational development and training association of process consultants. He is also a member of the graduate faculty at Regis University, Denver.

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ABSTRACT

The inability of early-service professionals to demonstrate practical wisdom has gained recent public concern. Problem-based models are acknowledged for effectively addressing these concerns; among them, case method pedagogy has received much praise. However, this teaching methodology has achieved little empirical attention. The aim of this paper is to report an empirical study of case method pedagogy as it is established in practice.

The literature review for this research provided a theoretical base for constructing a typology of case method styles (Dooley and Skinner, 1977; Doyle, W., 1986; and Zeichner & Liston, 1987). Three styles were identified, existing on a continuum from simple to complex cases, methods, participant roles, and outcomes. The synthesized typology was then used as a theoretical frame for guiding the investigation.

A multiple, embedded case study research design was employed to describe and explain the case method pedagogy used by two veteran practitioners. The units of analysis were two graduate courses, one a teacher ethics course and the other a business policy course. Both courses took place at a major university during the 1990 summer session.

The study found the goal of practical wisdom was achieved when students and teachers were engaged in "living-the-case," an experiential process described as "conversation with reality." This conversation was individually confrontive and enhanced by a variety of induction methods. When successful, case method teaching strengthened the integration of theoretical wisdom with practical wisdom. Evidence supports claims for case method pedagogy being an effective problem-based model and suggests that further research consider the practice as an experiential method, excluding didactic methods. The typology was altered, representing a theoretical frame informed by the data.

Key to this paper is the idea that previous testimonials for case method teaching have not thoroughly examined the practice, and have not substantiated reasons for success. Notions of learning theory from John Dewey to Donald Schön were tested in this investigation, and substantiated as effective explanations for the success of case method pedagogy. The importance of living-in-the-case stood out as the key to effective case method teaching. More specifically, when students were induced into the intersection of theory and practice, of intellectual and emotional experience, of intrinsic and extrinsic motivators, effective learning and retention took place. This process can be considered contextual learning with cases. Alternative explanations such as teacher charisma, quality of case writing, student ability, and so on, did not discount the finding of living in the case.

This study was mostly qualitative, with no intention of making analytic generalizations about case method teaching practices. However, because the findings were so striking, several speculations can be made about teaching practice, which are grounded in theoretical generalizations. Practitioners interested in demonstrating best practices in teacher education with case method pedagogy need to consider an emphasis on induction into the case. This focus has proven to be effective in spite of teaching style, quantity or quality of cases, or student background. Further, subjects described the didactic use of case method as uneducative or even miseducative.

The Importance of Living In The Case

Critiques of teacher education are continually changing, however one persistent focus of recent commentary is that complex formal education is failing to inter-weave theory and practice so that new graduates can do so in their professional service. There exists a growing desire to provide practitioners with the capacity to cope with uncertainty and act with a professional artistry embedded in theory (Floden, R. E., & Clark, C. M., 1988; Richardson, V., 1990; and Rubin, L. J., 1985), and to find a teaching method which would integrate the academic and real worlds and lead to a more reflective professional practice (Argyris, C. & Schön, D., 1974; Boyd, F., 1984; Goodlad, 1984; and Schön, D., 1983).

The use of case method pedagogy has increased in American teacher education, yet empirical portrayals of its successful use are rare. While many characterizations of effective case method teaching exist, most of these are testimonials or philosophical arguments for a method which has no common definition and no common practice. These testimonials are partially in response to public concern over the lack of practical and theoretical wisdom in neophytes, yet the actual practice of case method teaching has such variety that testimonials can become either unsubstantiated hopes or reflections of a practice or context which is not repeatable. Are we learning enough about case method teaching to rigorously apply it toward improving teacher education? The general answer from this study is, no. The practice is at present little understood with few empirical frameworks for understanding it.

An Historical Context

Case method pedagogy is difficult to define because the term is used to describe a great many teaching strategies, techniques and situations. Merriam (1988) saw case method as an "instructional technique whereby the major ingredients of a case study are presented to students for illustrative purposes or problem-solving experiences" (p. 15). Frances Boyd's (1984) simple description of the case method is, ". . . a laboratory method for professional training, in contrast to lecture or clinical methods. It is characterized by the use of prepared texts, 'cases,' and by particular kinds of discussions, 'case discussions'" (p. 5). Boyd noted that teacher education has become increasingly engaged in practice-centered training and indicated that practice can be added to the more traditional theoretical studies by using case method pedagogy.

Chris Argyris (1980), in his attempt to define the case method, interviewed professors from leading business schools. These case method experts agreed that there are generally five features central to the case method.

> They are: (1) the use of actual problems of organizations, (2) the maximal possible involvement of the participants in stating their views, inquiring into others' views,

> confronting differences, and making decisions, resulting in (3) a minimal degree of dependence on the faculty members who, in turn (4) hold the position that there are rarely any right or wrong answers, that cases are incomplete and so is reality, and (5) who will strive to make the case method as involving as possible through the creation of appropriate levels of drama. (p. 291)

I would offer a more generic definition. The case method is an instructional process, usually consisting of four phases: 1) a case which epitomizes a realistic set of problems or issues from a larger context is presented to students; 2) the case is analyzed, any additional information is gathered, and the problems/issues are defined; 3) students respond, usually by making decisions about appropriate solutions and designing implementations; and 4) feedback about the quality of the process is offered and discussed (Burger, 1991). These generic phases must be grounded in some philosophical frame before case method teaching can be considered a stand alone method. My study suggests that the frame be one of experiential education, in the tradition of Pragmatism, or contextual learning.

Teacher education began using the case method in the mid-1800's for illustrating how the "project method" could be used in classrooms. By 1933 the case method was being used in several fields at the New Jersey State Teachers College at Montclair. Case books and "problem situations" have been published for use in teacher education for some time (Doyle, 1986). Recently, Lee Shulman (1986) emphasized the value of case method for teacher education, suggesting that the method is more instructive than and different from either studying propositions about teaching and learning or student teaching.

There is general agreement that the case method is an efficient, effective and powerful pedagogy for linking the real world with the classroom. Shulman (1986) noted that the significance of the case method pedagogy lies in its capacity to transform teachers' knowledge from principles and experiences "to the wisdom of practice." Doriswami and Towl (1963) saw the value of the method as a "connecting link" which draws together the experience of professionals on the job, leaders, pre-professionals, and the researcher. These authors hailed the method as being the ". . . catalyst(s) to speed the process of learning from experience" (p. 6). Paul Lawrence (1953) noted that the case method is the "vehicle by which a chunk of reality is brought into the classroom to be worked over by the class and instructor" and that class dialogue was kept "grounded upon some of the stubborn facts that must be faced in real life situations" adding that this "anchor on academic flights of speculation" (p. 215) would lead to understanding complex situations. Finally, Charles Gragg (1954) supported the use of case studies, "Because wisdom can't be told."

In sum, case method pedagogy has been described as one essential methodology for approaching reflective practice, professional artistry, and coping with uncertainty because it is based in the realities of practice, in contexts.

Case Method Teaching Attributes

The case method is distinguished from other pedagogies in part because of a "dramatic" style of teaching. This is not the conventional sense of "drama," but a form of educative intervention. The purpose of drama is to further enhance the realism of the case and to engage the learner in a personally meaningful way. The students sense they are being offered a real opportunity to intervene in an actual situation. Of course, that is not literally true, but the sense of drama can enhance the students' level of motivation and their willingness to engage in the learning process seriously.

While the case method can be experiential in nature, it does not have the risks implicit in actual field experience. Nevertheless, case method has an ability to propel students into a problem solving situation. Students confront the lifelike nature of cases, imagine they are responsible for achieving a successful outcome, and are asked to successfully master any relevant problems or challenges. Joseph Wolfe (1975) claimed that regardless of how poorly case method is taught, "(s)tudents performing case analyses invariably come away with at least a problem solving methodology" (p. 450).

While problem solving and its supporting attributes usually characterize case method, this is not always true. Some instructors simply present cases to teach skills or specific knowledge (Masoner, 1988). Others use cases for introducing new content or to aid students in the memorization of important facts. Cases are also used for highlighting lectures, directing discussions, exposing facts, explaining relationships, demonstrating techniques, or providing expertise (Dooley & Skinner, 1977).

The case method is generally student-centered and student-directed. Students are expected to spend a greater percentage of the time talking than the professor. In addition, the flow of the process is student-directed in that there are few, if any, "right or wrong" answers or unassailable expert opinions. The professor may serve as facilitator and resource person but the students remain essentially responsible in terms of developing and defending case responses. This aspect is thought to be enhanced when combined with Socratic dialogue. "Socratic discussion is the process through which exercise is received in presenting arguments and in listening" (Masoner, 1988, p. 32). Through Socratic discussion, students develop the ability to exchange logically supported views, while gaining experience in on-the-spot thinking and collaborative learning or working.

A final necessary attribute of the case method is feedback. Feedback is provided by both professor and fellow students on the quality of student analyses, solutions, decisions, thinking skills and judgement. This forms a check on the creative efforts of the student, rather than on "right" answers. John Dewey's (1933) notion of reflective action is often an organizing principle for this feedback. "Reflective action entails the active, persistent, and careful

consideration of any belief or supposed form of knowledge in light of the grounds that support it and the consequences to which it leads" (Zeichner & Liston, 1987, p. 24). Still, some faculty are not very interested in using lengthy feedback to develop reflective action, and feel that a grade or certification is enough feedback (c.f., Dooley & Skinner, 1977).

Reviewing these attributes begins to provide us with a collective frame for understanding what this method's characteristics are, and illuminates the lack of rigor in which the method has been considered. Virtually any use of cases has been considered good and appropriate. A rigorous, empirical frame is needed to separate effective case method pedagogy from all the forms of teaching which use cases. This problem also exists with cases themselves.

Cases

An instructional "case" may be defined as an array of key events or situations that have some bearing on the learning objectives. Charles Gragg (1954) defined a case as a record of an issue which had been faced by a professional, including adjacent facts, opinions, and prejudices upon which decisions depend. Barnett and Cwirko-Godycki (1988) defined cases from a teacher educator's perspective as follows.

> Cases portray real classroom situations which may relate whole lessons, incidents in a lesson, or some other teaching situation or problem. A case incorporates all of the information available to clarify the events in the case, including information about the setting, the students, the lesson objectives, and the teacher. (p. 2)

They went on to argue that a "good" case is not merely a literal recording of an event, situation, or dilemma; rather, it is a carefully selected and explicated compilation which has clear theoretical and practical connections to learning objectives.

> A case, however, is not merely a "photo" of a situation. Its power lies in the knowledge, composed of theoretical or practical principles, that can be explicated from that event. Thus a "good" case provides a forum for presentation and critical examination of alternative hypotheses, theories, rationales, and approaches, which take into account the constraints and complexities of the classroom situation. (p. 3)

Reynolds (1978) saw all cases, from the most simple to the most complex, as potentially "good" and useful depending on the level of maturity and the needs of the learner. Guinn (1988) argued for self-generated cases, as standardized cases have the disadvantages of quickly becoming overused and obsolete, of failing to cultivate students' intellectual initiative, and ignoring students' individual interests. Doyle (1986) argued that "good" cases are firmly grounded in a theoretical knowledge of teaching and must illustrate critical factors.

> The definition, selection, design, and classification of cases in teacher education requires theoretical knowledge about teaching. Only with this theoretical knowledge can an instance be designated a case of something. Moreover, understanding the contribution of a case to the goals of teacher education depends upon a sense of what the case teaches and what importance that knowledge has for teachers' performance. (p. 10)

The content of cases themselves demonstrates variation in case method practice. The variations are from simple to complex, from clear exposition to ambiguous provocation. Central to all cases on this continuum is the expectation that they represent lifelike situations which are designed to engage the learner in processing subject matter in personally meaningful ways. I would agree with those that argue any case can be good, if the learner is induced into living-in-the-case.

Research on Case Method Practices

A review of the empirical literature on case method pedagogy reveals relatively few published studies on the topic (Alexander, O'Neill, Snyder & Townsend, 1986; Masoner, 1988; Wolfe & Guth, 1975). Most of the writing in teacher education is conceptual. Most of the studies in management education are exploratory in nature, using surveys and other self-report or testimonial material. However, several investigators have conducted experimental or quasi-experimental studies to test certain hypotheses concerning the case method.

William Fox (1963) found case method to have an above average practical value, hold average student interest, and require an average amount of out of class student time. Summers and Boyd (1982) rated case method as most efficacious business policy teaching method, followed by lecture/discussion, computer simulation games, and business simulation games. Alexander, O'Neill, Snyder and Townsend (1986), also investigating methods used in capstone business policy courses, showed that the case method was used in 84% of the courses surveyed and was used to a greater extent than any other course activity (e.g., term papers, computer games, etc.). Böcker (1987) measured students' ability to reproduce and apply knowledge or skills. He demonstrated case method pedagogy to be a more effective method than lecture teaching and that it significantly effected student motivation. John Montanari's (1980) findings failed to show any statistically significant effects for using case method in conjunction with lectures and simulations. Joseph Wolfe (1975) compared the use of case method and the use of initiative exercises, and indicated that the case method was superior for gains in overall knowledge and mastery of business policy principles. Wolfe and Guth (1975) compared case method and simulation games and found case method students performed better in collecting abstract decision-making information and the game students were better able to explain and describe principles presented to them. Finally, Boyd, Kopp and Shufeldt (1984), through a mailed a questionnaire, depicted students paying more attention to problem formulation than to strategy implementation.

Argyris (1980) performed one of the few published qualitative studies of case method pedagogy, portraying actual practice. He observed and interviewed faculty "stars" in a three-week executive management development in-service program, using case method as the

predominant mode of instruction. Argyris defined learning as "the detection and correction of error," and argued that such learning which does not result in changing assumptions, policies or goals should be considered "single-loop" learning. Likewise, "double-loop" (p. 291) learning occurs when learning requires changes in underlying reasoning.

The faculty stars claimed double-loop gains for both the individual learners and their organizations, but Argyris' findings suggested that the case methods used may have unintentionally reinforced single-loop learning and blocked any possibility for double-loop learning because it was highly teacher-directed. While the faculty claimed a Socratic approach to case method, their behaviors demonstrated controlled interactions resulting in student dependence. Argyris categorized the teacher-student interactions into those promoting student dependence, such as asking questions for which faculty had ready answers or making statements of fact about a case; and those promoting student independence, such as student to student responses. Argyris found faculty responses to students were double student to student responses. He concluded three consequences for learning: "(1) issues that are important to the students may be ignored, (2) students may select or distort information to win, and (3) student dependence on the faculty member may increase" (p. 292). Berger (1983) responded to Argyris, claiming his research had methodological flaws, and failed to include factors that might have affected learner behavior. He rhetorically claimed that ". . . blaming the case method is like blaming the hammer when the nail goes in crooked" (p. 331).

This review of the empirical literature shows that 40% of the studies were experiments or quasi-experiments, 40% were surveys or mailed questionnaires, 20% were descriptive which included only one interpretive design. The theoretical frames which informed these studies were not articulated by any of the researchers, however it can be assumed that the majority followed utilitarian frames such as structural perspectives or systems analytic theories.

Case Method Typologies

Considerable polarized controversy exists, in part, because researchers lack an answer to a simple question: What is the case method? Just as cases themselves vary, the term "case method" has no agreed upon definition. The only thing common to all of the definitions is that some form of a case is used. Dooley and Skinner (1977) summarized the controversy by saying:

> The fuzziness of the term "case method" causes serious dysfunctions. By falsely imputing a precise connotation to a highly varied and differentiated array of activities, both critics and supporters frequently miscommunicate. Important issues relating to teaching goals or styles often are blurred. There may be apparent agreement where no agreement exists, or an impression of serious pedagogic differences where few, if any, are present. (p. 277)

Table 1 - Dooley and Skinner's Profile of Pedagogy in the Teaching of Business Administration

Category	Educational Objectives	Case Description	Application of a Case	Teacher's Role	Student's Role	Class Percentage Teacher Talks	Teacher's Preparation	Teacher's Skills and Knowledge Required	Problems and Hazards Frequently Encountered	Requirements for Success	Judging Success of Class
I	Acquire knowledge	Exposition of business practice	Very poor	Narrate Explore Enlighten Provide expertise	Listen	95%	Organize facts so as to be in interesting, relevant and clear	Public speaking, Clarity of thinking and lucidity Organization of material	Student impatience, boredom	Student is concerned, feels problem exists and desires knowledge	Student interest, knowledge, retention, ability to playback
II	Develop concepts	Exposition of problem or in business	poor	Explain taxonomies and inter-relationships	Listen and question	85%	Organize facts to develop useful and meaningful inter-relationships	Competence in theory and ability to explain it simply	Student unawareness, unconcern with problems to which concept is addressed	Student hungers for concept after much wrestling with problem without conceptual scheme	Grasp of ability to playback and verbalize
III	Understand techniques	Problemette	Fair	Explain technique & its derivation and application	Work problem, examples Derive technique	70%	Understand theory and derivation and implications of technique	Ability to explain/derive and demonstrate	Student failure to see usefulness, practicality, relevance of techniques Confusion	Student sees need for technique before he/she gets it. Student derives technique himself/herself	Ability to work problems correctly
IV	Acquire skill in use of technique	Short realistic business situation structured	Good	Question and probe to develop realism	Work out effective use of technique in business situation	33%	Understand applications and limitations and problems in use of technique	Realistic recognition of problems in use of technique	"It seems to easy; it seems too hard; it seems too universal; it seems too limited"	Realistically demanding case. Teacher can restrain self from resolving problems	Practicality of student recommendations

Source: Dooley, A. R., & Skinner, W. (1977). Casing Casemethod Methods. Academy of Management Review, p. 286.

Table 1 (continued)

Category	Educational Objectives	Case Description	Application of a Case	Teacher's Role	Student's Role	Class Percentage Teacher Talks	Teacher's Preparation	Teacher's Skills and Knowledge Required	Problems and Hazards Frequently Encountered	Requirements for Success	Judging Success of Class
V	Acquire skill in analysis of action plans	Complex unstructured slice of life	Excellent	Probe Clarify Interrelate	Analyze Determine cause/effect relationships by analysis of facts and inferences	10%	Case analysis Develop many alternatives and predict possible student approaches	Questions to open up areas for discussion Careful listening Sense of realism	Teacher domination Teacher "telling" Teacher impatience, Teacher solving	Student willing to work, desires to analyze problem and feels competent	Thoroughness, variety, completeness of analysis in breadth and depth
VI	Acquire skill in synthesis of action plans	Problem with clear emphasis on action	Excellent	Challenge Question Extrapolate Role-play	Establish priorities, plan of action: Develop possible outcomes and implications	10%	Develop understanding of situation and possible approaches	Interpretation of student plan without domination	Teacher temptation to settle it with own ingenious analysis	Student feels he/she has necessary facts and is challenged to develop solution which he/she feels does exist	Creativity & realism of action plans
VII	Develop useful attitudes	V, VI, VII with emphasis on key executives	Excellent	Lift up the problem of executive attitudes	Discuss/ debate outcomes Personalize	10%	consider variety of attitudes, present and possible	Seeing problem from its many sides	Teacher imposition of own attitudes/ values	Teacher trusts that attitudes emerge as a long-term by-product of a demanding education	Changes in attitudes, increased confidence humility, responsibility
VIII	Develop mature judgement/ wisdom	Complex, realistic, unstructured problem	Excellent	Give feedback Restate Listen	Discuss/ debate Develop alternatives and their implication	5%	Case analysis in all possible dimensions	Self-restraint Perception of student state of progress	Teacher impatience, teacher inability to tolerate student frustration	Teacher can tolerate student frustrations	Waiting & trusting

Source: Dooley, A. R., & Skinner, W. (1977). Casing Casemethod Methods. Academy of Management Review, p. 286.

Perhaps Dooley's and Skinner's most important contribution is a typology of case method (Table 1) which organizes the pedagogy into eight logical and recognizable categories. Still, little empirical research has been performed based on their work.

Their typology does not suggest that one form of the case method is better than another; rather, it suggests that the richness of the method allows instructors to choose forms to fit their educational objectives. It is important to note that they include the uses of illustrative cases in a didactic lesson as a part of case method; in other words, to Dooley and Skinner, the case method is not limited to a non-directive, problem solving exercise as is sometimes implied by classic definitions of the pedagogy. Their typology is, however, limited to teaching in management education.

Their typology can be split into three philosophic orientations. Categories I through IV have an orientation toward believing in absolutes (subjective or objective). They result in the instructor taking responsibility for imparting knowledge efficiently while students passively absorb faculty wisdom. Categories V and VI oppose the first orientation by holding students responsible for their own learning, the instructor role then becomes one of directing traffic. Categories VII and VIII approach a "middle-ground philosophy" (p. 283) by viewing the instructor and student roles as interdependent.

It could be argued that their typology is somewhat simplistic in its proposal of the "grand continuum." For example, it is possible to imagine a case method lesson where the learner would be offered a complex ambiguous case by a highly directive teacher, and be expected to come up with one right answer. This example is a blending of Dooley and Skinner categories VIII, II, and I; they provided no way to categorize such a lesson. Dooley and Skinner argued that their philosophical labels and practice categories merely acknowledge variety and are not intended to be meaningful identifiers, but are "a start on the process" (p.288). The typology is also written behaviorally, with little regard for conceptual or contextual aspects.

Doyle (1986) offered an alternative typology from the teacher education perspective (Table 2), with three categories he called "Frameworks." The continuum implicit in the Doyle typology is similar to Dooley and Skinner's grand continuum and a close examination suggests that the two typologies are fairly compatible.

Doyle's first category, "Precept and Practice," reflects the assumption that teaching is best learned by studying precepts and then practicing skills or emulating a model. In terms of a case method typology, this first category includes the use of cases for teaching content, specific knowledge, skill building, mastery of techniques, and illustrating relationships and taxonomies.

> Within this framework, cases of teaching are most often rhetorical devices, i.e., examples inserted in a text or lecture to clarify precepts and make the information relevant

and interesting. When framed as examples, cases are presented briefly and selected to illustrate a specific point. (Doyle, 1986, p. 4)

Doyle's second category, "Problem-Solving and Decision-Making," is the result of his contention that a relatively recent shift in teacher education has changed the focus from mastery of techniques and teaching behaviors toward complex cognitive skills. Doyle described this category as follows.

> In the (problem-solving and decision-making form of the) case method, an instance of practice is not simply an example to illustrate or a model to imitate. Rather, it is a precedent that exemplifies not only how a lesson was conducted but also what the problematics of the performance were. A case as a precedent is a more complex and less well-formed representation of an instance of teaching than an example or a demonstration model. The case becomes a story with character, setting, plot, and history. (Doyle, 1986, p. 5)

Doyle's third category is called "Knowledge and Understanding." This category rests on the premise that teacher actions reflect their

Table 2 - Doyle's Typology

	Educational Objective	Teacher's Role	Student's Role	Nature of the Cases
Framework I "Precept and Practice"	Acquire skills, master precepts, illustrate a model	Lecturing, providing texts or cases, demonstration	Emulate skills, absorb information	Rhetorical devices, examples to clarify precepts
Framework II "Problem-Solving"	Cognitive dimensions of teaching decision-making problem-solving	Connect knowledge to situations, guide students to the problematics	Active role in analyzing situations, and bring knowledge to bear on problematics	Provide "controlled practice," exemplify a precedent that is problematic via story form
Framework III "Knowledge and understanding"	Understanding of action-situations or propositional knowledge	Provide elaborated cognitive view of the nature of teaching	Develop professional knowledge for practical reasoning	Multiple cases serve as prototypes to instantiate theoretical knowledge

understanding of situational knowledge in the teaching context. Essentially, this form of case method attempts to teach pre- and in-service teachers to be comfortable in the complex, dynamic classroom setting. Doyle (1986) used the concepts of cognitive theory to outline this case method approach.

> . . .what teachers do reflects their understandings of action-situation relationships in classroom environments. . . This knowledge enables them to recognize and interpret classroom events and act in ways that move them toward their goals. (p. 7)
>
> In particular, cases serve as prototypes that instantiate theoretical knowledge about teaching in almost the same sense that cases in interpretive research provide the grounds for formulating theoretical propositions. In addition, then, to providing opportunities for active analysis and problem-solving, theoretically-specified cases supply a foundation for developing the knowledge structures necessary for comprehending classroom realities. (p. 9)

In contrast to the Dooley and Skinner typology, which was specifically developed for the case method, the Doyle typology is based on his sense of how teacher education has evolved. His first category epitomizes the traditional method of teacher education which relies on memorizing precepts and imitating models. The second category encompasses a more modern form of teacher education, and is based on learning a problem-solving and decision-making process. Doyle's final category corresponds to some current notions of teacher education reform and is similar to what Dewey might have called "reflective action." This third category may be limited by its grounding in psychological theories, but is distinguished by the notion of integrating theory and practice.

Doyle also went beyond Dooley and Skinner in that he included a value orientation in his typology. He did not believe the Precept and Practice approach to case method was wrong; rather, it was incomplete by itself. For Doyle, teacher education activities must lead to Framework III if teachers are to learn to operate effectively in the classroom.

A third typology (Table 3), articulated by Zeichner and Liston (1987), was designed to discriminate between levels of "reflective teaching." Essentially it suggests a synthesis of the two typologies described above. In addition, it integrates the concept of reflective action and practice as articulated by Dewey (1933) and Schön (1983).

Their reflective teaching nomenclature is based on the work of Van Manen (1977). It has three levels, the first of which is entitled "technical rationality." Essentially teachers operating on the technical rationality level have a "dominant concern . . . with the efficient and effective application of educational knowledge for the purposes of attaining ends which are accepted as given" (Zeichner & Liston, 1987, p. 24). This is similar to the skills and content focus of Dooley and Skinner's categories I, II, III, and IV and to Doyle's Framework I category of "Precept and Practice."

The second category is entitled "practical action" and focuses on problem solving and consequences. ". . . [T]he problem is one of explicating and clarifying the assumptions and predispositions underlying practical affairs and assessing the educational consequences toward which an action leads" (p. 24). This corresponds to Dooley and Skinner's categories V and VI and to Doyle's Framework II category of "Problem-solving and Decision-making."

The third and final level is entitled "critical reflection." It is a process which integrates value judgements with practical actions. The learner applies the new skills in the classroom

environment, reflects upon their success in an ethical context, and is accountable for the achieved end. This category incorporates Schön's "reflective practice" and Dewey's "reflective action." Zeichner and Liston (1987) described it as follows.

> The third level, critical reflection, incorporates moral and ethical criteria into the discourse about practical action. At this level the central questions ask which educational goals, experiences, and activities lead toward forms of life which are mediated by concerns for justice, equity, and concrete fulfillment, and whether current arrangements serve important human needs and satisfy important human purposes. Here both the teaching (ends and means) and the surrounding contexts are viewed as problematic--that is, as value-governed selections from a larger universe of possibilities. (p. 25)

Table 3 - Zeichner and Liston's Typology

	Educational Objective	Teacher's Role	Student's Role
"Technical Rationality"	Efficient and effective application of educational knowledge for accepted ends	Model technical competence, inquiry-oriented about non-problematic contexts	Reflect on technical competence in instruction and management
"Practical Action"	Explication and clarification of assumptions and predispositions underlying practice	Model congruent practices, inquiry-oriented, and assesses consequences of actions	Reflect on practice, analyze behaviors in the contexts of goals
"Critical Reflection"	Incorporation of moral and ethical criteria in discourse about practical action	Model morality and self-renewal; inquiry-oriented about justice, equity, fulfillment and service	Reflect on ethical and moral consequences of teaching, defend choices, and gain sensitivity to diverse needs

This category corresponds to Dooley and Skinner's categories VII and VIII and to Doyle's Framework III category, "Knowledge and Understanding." However, Zeichner and Liston have gone beyond the two previous considerations by adding the ethical dimension.

John Dewey (1916) synthesized this third level by noting that the place of thinking is in experience, that is, reflecting during an experience is basic to learning. Such reflection involves the connection of doing with something undergone in consequence. The consequences of ethical decisions bring personal meaning to the surface, thus engaging the learner perhaps more than less volatile subjects might. Dewey's description of "reasoning" applies directly to this third model of case method.

> Thinking includes all of these steps, -- the sense of a problem, the observation of conditions, the formation and rational elaboration of a suggested conclusion, and the active experimental testing. While all thinking results in knowledge, ultimately the value of knowledge is subordinate to its use in thinking. For we live not in a settled and finished world, but in one which is going on, and where our main task is prospective, and where retrospect -- and all knowledge as distinct from thought is retrospect -- is of value in the solidity, security, and fertility it affords our dealings with the future. (p. 177)

Integrating the Zeichner and Liston typology into the two previously discussed typologies allows a synthesis of the principal elements of several seminal ideas. In addition, it offers titles for a synthesized case method typology (Table 4) which are simple, intuitive, and based on important values and concepts. Finally, it provides the utility of a basis for research in that the categories readily identify case method theoretical propositions for study.

Case Method #I, "Technical Rationality," can be described as a case method used for developing basic skills and specific content knowledge. Instructors provide simple cases which illustrate or demonstrate a technique or specific knowledge. The instructors disseminate this important information by using cases as illuminating examples of the content being covered. The instructors model consistency in effective skills and knowledge usage. Students are expected to learn these fundamentals for future practice. It is important for students to understand when, where, and why these techniques or understandings would apply.

Case Method #II, "Practical Action," can be described as a case method used for teaching problem-solving and decision-making skills. The instructor provides problematic cases, which are complete enough to capture central issues. Instructors facilitate the group setting, including students' describing the problems/issues, analysis and generation of solutions, and defense of implementation plans. The instructor models multiple problem solving and decision making processes, usually by the nature of their inquiry. The students are expected to initiate the process and direct the bulk of classroom time.

Case Method #III, "Critical Reflection," can be described as a case method used for developing students' ability to think critically, commit to ethical actions grounded in theoretical constructs, and generally act in creative and reflective ways. The learner should integrate reflective with prospective practice. The instructor provides the cases, usually written in a narrative fashion that dramatically describes an event or situation. The cases are typically clear about the conditions of the problematic situation and reflect the diverse and ambiguous nature of real life settings. The instructor facilitates student-directed discussions in terms of questioning the pragmatics, ethics, and moral qualities of student analysis, proposed actions and defense thereof. The instructor models congruence between their educational theories, objectives and content, and between their philosophical assumptions

and their behaviors. Rather than fixed answers, this method typically promotes a sense of ongoing interpretations of meaning.

Table 4 - Integral Case Method Typology

	Educational Objective	Teacher's Role	Student's Role	Nature of the Cases
METHOD I "Technical Rationality"	Teach application level skills and specific content knowledge	Model effective skills and knowledge comprehension	Reflect on and demonstrate knowledge of skills and basic precepts of the profession	Simple, usually short, complete and concise with little ambiguity
METHOD II "Practical Action"	Acquire general process skills for acting in complex settings	Model multiple processes for problem solving and facilitate group process	Reflect on working in groups, process skills, and applications in complex settings	Complex stories that define the boundaries of a real life, problematic event
METHOD III "Critical Reflection"	Acquire understanding and ability to practice reflectively, integrating specific knowledge with general or transferable skills	Model comfort with uncertainty, allow for personal interpretation, and facilitate the understanding of reasoned and ethical actions in ambiguous settings	Construct, reflect on and defend analysis, implementation plans, consequences, and ethical purposes	Complex, incomplete stories that reflect real life ambiguous conditions and a wide range of philosophical and practical implications

This synthesized typology provided a theoretical framework for the research reported herein, and is differentiated from other frames by its grounding in contextual learning for each sub-method.

Research Methodology

I conducted a pilot study, consisting of a survey questionnaire administered to students from three university courses claiming to use case method pedagogy: an undergraduate education psychology course which used short cases–a sentence to a paragraph in length–which the professor called "problem tasks;" an alternative teacher certification program for non-traditional students, designed to use cases extensively in the first month of study, then

interspersed them irregularly throughout the remainder of the two semester program; and, a business policy course taught for graduating MBA students which used case method pedagogy for over a third of the semester.

The questionnaire gathered general demographic data on students, their experiences with case method, and their views on the efficacy of case method. Interviews and classroom observations were conducted to more clearly define case method teaching, to gather my focus, and to provide skill building activities for qualitative research procedures. This preliminary work also helped sensitize me to issues embedded in case method teaching, or as Goode and Hatt (1952) put it, to provide a "dress rehearsal" (p. 146).

No substantive data were produced, but the study suggested that a broad survey of styles would be too wide a screen to offer important findings. Case method proved to be too idiosyncratically used to allow for a universal definition which would hold meaning. Further, the survey provided neither a close up look at subtle interactions nor empirical evidence for the claims made of case method teaching. The pilot study did help focus on definition of the case method, construction of the integral typology, and a comparative look at teacher intentions and implementation practices.

Case study research appeared to be the most appropriate method for further inquiry into case method pedagogy. A descriptive and exploratory investigation was designed as a comparative, multi-unit case study of two classes using case method pedagogy.

Independent practice and innovations occur at different sites; thus, each site was the subject of an individual case study, and the study as a whole was a multiple-case design. Yin (1989, p. 49), defined an "embedded" case study design as one in which subunits are studied as well as the main focus; in contrast, a "holistic" design covers the global nature of one unit. Case method teaching was considered too indeterminate for a holistic design.

Multiple cases should be considered multiple experiments, thus I used a "replication" logic and not a "sampling" logic (Yin, 1989, p. 52-3). Having more than one case (sample) allowed for the gathering of more data and was considered a better test of the theoretical propositions and case method practices in the two traditions (Education and Management). A quantitative study was not considered appropriate because data could not be grounded in theory, and case method practices, without definition, could not be generalized. Therefore, this case study design was indicated as it was not threatened by sampling problems which occur when there is an attempt to generalize to a broader population.

The chosen methodology was not tied to either a quantitative or qualitative orientation, but employed a mix of appropriate methods based on the logical connections to the research questions and case contexts. I did not intend to provide an equal balance of qualitative and quantitative approaches, as these two approaches are not perceived to be dichotomous; rather,

I consider them inseparable and interdependent. This philosophical orientation aligns with a practical use of what are considered interdependent approaches (Howe, K., 1988; Howe, K., & Eisenhart, M. 1990; and Scriven, M., 1972), and should be judged more on its logical usage than on any alignment with a particular research epistemology. The most appropriate mix of methods resulted in mostly qualitative approaches being used in that the primary instrument for data collection and analysis was this researcher.

Flexibility in research design was desirable, so the design was particularistic, descriptive, heuristic, and inductive, allowing for interpretation in context to occur. An advantage of this was that the approach could depict individuals interpreting and constructing reality while interacting with their history and external social realities. This position is aligned with symbolic interactionism as described by Taylor and Bogdan (1984) and the hermeneutic or interpretive tradition as described by Jonas Soltis (1990).

One broad unit of analysis, or case for study, was a course titled Business Policy, conducted during the summer of 1990, at "Central State University," in the Graduate School of Business Administration. The second broad unit of analysis was a course titled Teacher Ethics, scheduled the same summer, at "Central State University," in the Graduate School of Education. Both courses offered three semester credit hours. The two cases had embedded within them sub-populations, including the faculty and the students. They also included consideration of the university context. All these became specific units to be analyzed.

The courses provided two examples which followed cross-experiment analysis rather than within-experiment design and logic. One reason for selecting these two cases was the likelihood that they would either produce similar results, a "literal replication" or produce contrary results but for predictable reasons, thus resulting in a "theoretical replication" (Yin, 1989, p. 53). Ethics and business policy were viewed as sufficiently complex to render high potential for reflection, giving cause for use of more than one case method teaching style.

The Business course, for the most part, was the final course for MBA students. The Education course, for the most part, was taken by Masters level students early or in their graduate studies. The Education student body consisted of seven females, with one Black and six Caucasians, ranging in age from 23 to 51; their mean age was 39. Five were classroom teachers. Of the seven, two had only limited experience with the case study method. There were 50 students in the Business class. All but ten were MBA students planning on graduating at the end of the summer session. The fifty students consisted of: a dozen women, one Black male, two Indians (a married couple from southern India), two Pacific Islanders (one from Japan and one from Jakarta), an Italian, an Australian, and three Norwegians. Their average age was 27, within a range of 23 to 45. The age distribution was skewed toward the younger end, with most

of the students coming straight from their undergraduate degree. They had all experienced case method teaching.

Data Collection and Analysis

Data were collected via pre- and post-course interviews with the professors, frequent informal interviews with the professors and students during the course, post-course interviews with volunteer students, participant observation throughout both courses, and responses (personal interpretations) to analyzed data by informants or interview respondents. Artifacts were collected, such as written cases used, end of course evaluations administered by faculty, course syllabi, and course texts or hand-outs. A questionnaire was administered to students at the end of each course. All these sources of data established a "chain of evidence (Yin, 1989)."

The data were collected and analyzed via appropriate case study or qualitative techniques (Erickson, 1986; Goetz & LeCompte, 1984; Goode & Hatt, 1952; Merriam, 1988; Miles & Huberman, 1984; Patton, 1980; Stake, 1988; and Yin, 1989). The analysis, in general, was formed by reviewing the research questions and the baseline data record. Data were classified into two initial groups, those used for description and those used as an evidentiary basis to answer questions. A variety of specific analytic processes were used which best matched the types of questions raised.

The central process used was "pattern matching" (Campbell, D., 1969; and Yin, 1989), i.e., matching the patterns of the synthesized typology with patterns in actual practice. The typology made sense, in that the categories were compatible with the data record, but it did not adequately explain the phenomena being studied. Some categories required modification or discarding. Some data did not match the typology in any sequential form (no progression through the method levels, or through a single method). These and other nonconforming data mandated a modification of theory as well as generating further questions for study.

Claims made by instructors prior to the course were evaluated in terms of how they matched the structure of the typology and whether or not they were achieved. Teacher intentions may have been changed by the exigencies of the classroom context, so vignettes of classroom context were collected. Teachers may have wanted to portray themselves in a certain light based on their perception of what exemplary practice meant. Therefore, sensitive questions were embedded in the general questions, and asked in a neutral way. Triangulation strategies to cross-check the accuracy of instructor and student self-reports were employed to reduce the effects of bias, including researcher bias.

Student discussions of the first and last cases were analyzed for evidence of improvement in analysis and construction of solutions to case problems. The end of course questionnaire was administered to retrieve general impressions from the students. These data were

quantified in terms of frequencies and central tendencies to represent the fundamental student responses to case method pedagogy.

The predicted patterns from the inchoate typology, from the assertions of reflective practice, and from assertions concerning teacher intentions and implementation were used for matching with the actual practice in the two cases.

Reliability of this study was considered in that all data collection and analysis operations were carefully described. If the research were conducted again, strictly following the data collection and analysis procedures, similar results would be inferred.

Interpretations

The description herein is both a story of two case method practitioners and of their practice, portraying the characteristics of the two classroom cultures, and a context for understanding the analysis. In general, the model of case method teaching used in both the investigated settings seemed to follow generic patterns predicted in the literature.

Neither professor provided (on a regular basis) formal feedback to students about the quality of their processes, even though case method literature suggested such feedback was a common and desired practice. There was ambiguity in both classes as to what constituted a case. For example, in the Business class, students often considered their computer game a case study. And, in the Education class, videos were often processed in the same manner as cases. This confusion corresponded with the confusion found in the literature about what constitutes a case or case study teaching.

George K. Holmes, the Education professor, was educated as a philosopher in a large university. He had received his Ph.D. and had published well enough to be appointed to his first tenure track faculty position at Central State University in 1986. At the time of this study, he was 41 years old and had been teaching, in various appointments for 16 years. From 1974 to 1977 he taught part-time at a junior college, then taught sporadically from 1978 to 1981, but used no case method during this period. In 1981 he began working in a medical school where case method was used to teach medical ethics. For six academic years he observed case methods being used by his colleagues.

Dr. Holmes argued that case method should not be used in all situations, nor should there be standard considerations for using case method. For Dr. Holmes, it depended on the nature of the course and what the teacher was trying to accomplish. The use of case method teaching was the provision of practice in coping with "the open-ended nature of life." This perspective proved to be a deciding factor in how Dr. Holmes structured (or refused to structure) his course.

Dr. Holmes distinguished between law school case method (or what he called "pseudo-Socratic" case method) and open-ended cases. In the pseudo method, according to Dr. Holmes,

the teacher's destination is set ahead of time, thus reducing student interactions to "sham discussions." His stated belief was that a difference exists between trying to lead students to a certain point versus really opening the discussion up and allowing a dialogue of mutual interests between the teacher and students to drive the discussion. That, in his view, would be more Socratic. Certainly his non-directive behaviors in the classroom later reflected this attitude. When discussions came near to closure, Dr. Holmes would provoke more deliberation by twisting some detail or transferring the issue to another setting.

Dr. Holmes' professional history seemed to favor of student interactions, and discussions in particular. Discussions in his classroom reflected an apparent tension between empowering students and allowing them to speak in a safe atmosphere, whilst not allowing unsúbstantiated statements to go unchallenged. As Dr. Holmes saw it, a teacher must create a trusting environment which permits students to say anything they wanted to, while expecting the teacher to look for aspects to criticize. Criticism meant that a teacher should not agree with every idea no matter what; he or she should generate corrective criticism of answers and somehow instill the notion that some answers are better than others, or are more defensible, while at the same time avoiding "turning students off." He said "you have to operate with some principle of tolerance for disagreeing" and "that can be a delicate thing you can't always do." This delicate stand proved to be as difficult as Dr. Holmes predicted, as some students were more frustrated by, than tolerant of, difference.

Dr. Holmes sought to teach a few principle tools so case studies would not be aimless. He chose cases that fit different issues, for example: due process, equal opportunity, or intellectual freedom. They were chosen to illustrate, and force students to contend with, issues within boundaries. Dr. Holmes wanted to make the content relevant, but also felt he must introduce topics in which the students had no interest. His believed that both sides of the desk had important agendas and give and take would be an important part of all teaching.

Dr. Holmes thought case method "should be the predominant method of teaching in education." He unhappyly felt that few if any faculty were using the method; but he agreed that case method should not to be the only method of teaching, even though it did provide important basics.

Dr. Holmes put teacher and student roles into a metaphor. His overarching pedagogical objective was "For students to become more like players in a jazz band; not neophytes but players with a general theme and independent input." His job was to generate or help students generate the themes, and to orchestrate ways of coping with an unknown future, in concert with the students.

Milton H. Feinblum, the Business professor, was educated in business administration at a large southern university. After his undergraduate studies Dr. Feinblum spent some time in

business; trying his hand at entrepreneurship before entering graduate school. Dr. Feinblum had published sufficiently to obtain his first tenure track faculty position at Central State University. In this summer of 1990, he was 41 years old and had been teaching at C.S.U. for eight years. He had taught as a doctoral student for three years. He had taught the business policy course for eight years, and a similar one for two years at the institution from which he received his doctorate. Thus, he had been using case method teaching for ten years, and on a couple of occasions, Dr. Feinblum received formal training in case method pedagogy.

In 1988, Dr. Feinblum attended a seminar put on by an east coast college. The institute brought in entrepreneurship faculty members from colleges around the world. Three days were devoted to issues related to the teaching of entrepreneurship with 75% of the focus on how to teach cases; the remaining percentage was on how to use audio tapes, video tapes, and projects as teaching techniques. The ten year old institute also brought in recognized experts (from Harvard) in case teaching methodology. They provided a variety of readings on how to teach using cases and the participants went through cases on teaching.

Dr. Feinblum estimated that most faculty members who teach entrepreneurship have come from a background similar to his–business policy–which lends itself well to a comfortable use of case work. He chose case method because it was the tradition of his professional history. He found himself to be "not the prototypical lecturer." He felt one of his strengths was facilitating discussions, and he was philosophically aligned with the idea of providing a practical, applied context for discussions. He said case method teaching met his objectives and noted a long history of developments in the use of case methods for business policy classrooms, in what it can provide and add to the classroom.

His most important teaching considerations were on the flip chart paper, hung in his office. He claimed to have plagiarized the list from a teaching excellence handout. The last point on the list was the most important to him. Dr. Feinblum paraphrased it by saying:

> Don't go overboard on content, give equal consideration to process and people, particularly when you are teaching in a case course. That's one of the reasons I spend so much time in the beginning of the semester, literally the first day, finding out about my students. I think that in order for the case program to work, you have to know a little bit about your students, who they are and what their backgrounds are; so you can make questions relevant to them, poignant to them, to bring out examples, or to ask them for examples from their own previous experience and background and make that relevant to the case.

His actions in the course corroborated these sentiments. For example, he covered his syllabus in class but did not hold a case discussion the first day of class, even though many students had come to class prepared to do so. Instead, he used a process for getting to know class participants.

Dr. Feinblum further noted that some cases he used were between 10 and 15 years old. But for him the relevance quest could still be addressed because businesses go through similar problems, spanning time. He demonstrated a penchant for asking students who had some background or had gone through something similar, to relate their experiences to what they saw in a case. Seeing that this approach might not make every case draw on the interests of students, Dr. Feinblum added the importance of understanding the process:

> . . . when to push the students and when to back off. There are times when what I've got written in my syllabus says that I will take the role of a friendly critic, but to recognize that not everyone in the world is a friendly critic and that there are times when I will change my hat.

He felt that students would eventually deal with people of many different personalities and that they needed to practice interpersonal skills. So, both practitioners in this study claimed an interest in making course content relevant and that teacher interventions were a necessary part of their role if students were to be held responsible.

The flip chart list further reminded Dr. Feinblum that telling is not teaching and hearing is not understanding. His specific case method considerations concerned preparing the case, understanding what the case is about, and how to talk about the case. He also felt that a case method teacher must be flexible.

> While I come in with an agenda, it is not always the agenda that is most important to the students. And in fact, there are some times when the students will hit on a point that I've never considered, the teaching manual has never considered, and it is important to the students. You also have to recognize when the flow is moving away from what you think are the important issues and you have to be able to bring them back to that. I have found that not everyone is comfortable with teaching cases. Not everyone has the skills necessary for it. You have to know when to make a joke, when to be serious, and when the content matter is important.

Dr. Feinblum felt that his case method teaching style was different from "the traditional Harvard approach." He noted that, in the tradition, the teacher would leave the case discussion to lecture on theory, but Dr. Feinblum's stated preference was to cover "those things up front before we get into a case through a short lecture."

Dr. Feinblum noted that some cases are short, two to three page "critical incidents." He preferred longer, "real" cases. He and Dr. Holmes might have argued this point, but Dr. Feinblum defended his preference by saying almost any practitioner could read a case and make a recommendation. However, if the case were from real life, the practitioners would have to be able to defend their arguments, demonstrate that their solutions would work, have more than one answer, and use their people skills.

Dr. Feinblum's overarching pedagogical objective was also converted to a metaphor. His aim was one intended to shift the scenario of teacher as "director" and students as "receivers of wisdom," to teacher as "facilitator" and students as "critical or strategic thinkers."

Both practitioners' pre-course frames of reference were very similar in their devotion to the practitioner. Both teachers pointed out relevance to their students, and specifically the presentation of real-life problems, as a central concern. It is also evident that their implementation of case method proved to be generically similar. However, their individual interpretations of the method demonstrated the variety of approaches the method receives.

The Education Case Method Practice: Dr. Holmes taught this teacher ethics course using case method as the primary teaching methodology. His 22 cases ranged from a 1/2 page to 12 pages in length, shorter cases being the norm. The cases came from texts, students in the class, or hand-outs written by former students. He began using cases the first day, and typically covered two cases each day. There were only two days during the course when cases were not discussed. However, on those two days videos were viewed and discussed in the same manner as cases.

Dr. Holmes' format typically had students read two cases at home, respond to one in writing, and come to class prepared for small group discussions which lasted from 15 minutes to an hour and a half. Students, in two groups of three or four, discussed both cases first without the teacher, and then drew together as a whole class, with Dr. Holmes, to discuss their analyses and positions. Students typically directed the whole class discussions by explaining their small group discussions of written responses to the whole class.

On the first day of class, Dr. Holmes spent only a few moments on introductions, and shifted to logistics. He then described case studies as a way to help students learn how to deliberate, and began the first case.

During the semester, Dr. Holmes would sometimes bring closure to these presentations or push a discussion with questions, but seldom displayed other directive behaviors. As an example of his instructional input, Dr. Holmes often provoked students into a deeper level of deliberation by using his common segue, "Well, I'm just imagining a scenario here. Suppose. . ." and thus would push a case in differing directions. He was directive when he introduced case discussions, by providing a table for students to fill in. This chalkboard table consisted of three horizontal rows entitled, "Alternatives," "Reasons," and "Missing," and two vertical columns, one for each discussion group. When acquainting students with this infrastructure Dr. Holmes ended the small group discussions by saying, "Now, let me keep track of what gets said up here; sort of a record to react to." He wrote in two examples of alternatives and one example of what was missing, which he had gathered from the discussions. After writing a student comment into the record, he asked "These are the live alternatives for you?" The students asked what he meant, he responded "I mean, the ones that you are considering?" The students apparently understood and began to respond with additional data for the record. Dr.

Holmes would ask a few clarifying questions, and the students would sometimes respond one group to the other.

This guiding structure was only formally used the first two days of class. Later, when the flow of student comments began to slow down, Dr. Holmes spontaneously shifted gears with his familiar "suppose. . ." scenario and pushed discussions in that manner; but he seldom pushed students toward a preconceived destination. At times, when students seemed upset by the process, Dr. Holmes would say, "I'm not taking a defensive position or putting you down, I'm just trying to figure this out."

Dr. Holmes also interspersed lectures concerning frameworks for making ethical deliberations. He called these and other talks, "lecture/discussions." Some of these talks took the form of clarifying specific content; for example, a short talk on a law or precedent concerning a court case. However, most teacher talk was in the context of a discussion. Holmes did not use case notes, which would describe a case and how to discuss it, but was very familiar with all of the cases he offered.

The semester began with historical cases and their surrounding court decisions. Soon the cases were written in pseudonyms, were from unknown times or places, and were loosely connected to the ethical theories being covered via lecture/discussions or in the readings. The semester ended with cases written by the students. As some of the students were practicing teachers, the cases were generally relevant to everyday teaching encounters. If the case were more generic, the students seemed to transfer the case issue to current events in their lives and discuss the same issue in the context of their real life details.

Students tended to respond first with their opinions, then with their positions. Connecting their individual positions with an established ethical theory tended to be for the secondary buttressing of arguments. This was usually followed by seeking clarity on laws, or memorizing court precedents which would provide an objective measure for their positions. The discussions would then cycle back to the details of the case, testing the positions in real life settings.

During post-course interviews, students stated a preference for the case method and for this course. A common comment was, "This course was great because the cases dealt with real issues, the kind I face day to day. . . . and nobody has ever wanted to help me with how to think about them!"

Questions elicited their views on what was gained, what evidence supported their claims, and what advice they would give their professor for improving his case method teaching. The praise for the course and for case method was lengthy and substantiated. Several students enjoyed the real life quality of case method pedagogy. As one student put it, "It's a technique whereby you can use educational philosophy, and bring the abstract down to the reality of the

situation through a personal kind of situation." Five Education students made reference to cases providing a "context" to study content with.

The majority of comments focused on the students' sense of feeling unable to take a stand before the class but being willing and confident to be on their own and take a stand even in ambiguous settings after the class. One said that she was forced to include other perspectives in her thinking, while previous classes had taught her to memorize or to think in a vacuum.

The interviews corroborated the idea that case method, in this class, helped students learn how to cope with uncertainty. More specifically, it taught students to encounter problems even when no single solution or method of problem solving was evident.

The students strongly recommended the course, and the case method process, but described structural weaknesses in delivery. Dr. Holmes claimed early on, "I'm not very directive," as if by acknowledging this, opposition would be averted. Notably, there were very few best practices examples early in the semester. Holmes had complained that not having any men in the class was probably skewing the discussions, as, in his experience, men acted as "lightning bolts" to stir up controversy. Nevertheless, the students ended on a positive note.

The Business Case Method Practice: Dr. Feinblum focused the Business Policy course on business strategies or strategic thinking. He used case method as the secondary teaching method, with the major portion of the course being a computer simulation game. The game generated statistics for a gadget industry, and student teams of three to five were to make quarterly business decisions based on the computer output.

Dr. Feinblum's 7 cases ranged in length from 9 to 30 pages. All but one case, which Dr. Feinblum wrote and published, came from the Harvard Business School case services. His case method format consisted of providing topical readings, holding lecture/discussion sessions concerning the reading topic, having the students read the relevant case at home, and completing the case with a whole class discussion (50 students) which lasted from 30 minutes to 2 hours. Students were prepared for the discussions with focussing questions written in a syllabus, and discussions were usually organized with teacher questions preceding student answers. On occasion Dr. Feinblum gave short lectures before or after cases. Discussion was typically desired and sought by Dr. Feinblum during his lectures.

This semester's seven cases did not appear to follow a sequence based on content. The first few cases were about charismatic individuals and issues of how to manage creativity. Later cases included more information about businesses which included similar leaders–Dr. Feinblum even called one an "icon." Two cases were mostly about business, and might be considered more traditional, yet one of these cases considered the power of the company's code of conduct. The final case of the semester was a case on ethics. Dr. Feinblum had published

teacher notes for all the cases, which alerted him to key issues and provided suggestions concerning how to best process discussions. He was thoroughly familiar with all of the cases.

Feinblum's style of case method teaching was a blend of covering basic skills and content knowledge, solving common business problems, and confronting more ambiguous questions of the effect on business wrought by personality and belief systems.

In interviews, students stated a preference for case method and this course. A common comment was, "This course really helped me pull together the pieces. It was insightful for actually applying theories in the real world!" A more specific compliment demonstrated how engaging and ongoing the course and the case method process were. "It's like going to a play and you're being told the story, and after the play, you keep talking about it, the characters, and thinking about it. . ."

In exit interviews, the praise was lengthy and substantiated. The majority of the students' comments focused on their enjoying the chance to apply theory experientially, to know there is more than one right answer, and to learn how to juggle several perspectives and elements in a life-like setting. One informant described it as having "a window on somebody else's experiences, and it's always good to have the education, the theory part re-enforced by some experience. Even though this is kind of a vicarious experience, it's still seems real." Several students noted that they enjoyed this vicarious character; for instance one student offered, "certainly, the thing is to learn from other people's mistakes!"

Many saw the discussions as the experiential ground for applying their analysis and solutions. Even though they claimed discomfort with the ambiguity, change, and unknown direction discussions would take, they preferred the safe place to practice for real life settings. All of the informants mentioned a distaste for theory and lecture, unless the ideas could be tested in some practical way, as in case studies.

Complaints centered around not having enough case method, "The only problem with Dr. Feinblum's class is that we were so focused on the game, the cases were really interesting, but I don't think I got as much out of them because he was so focused on the game." In contrast, one student reflected the sentiment of his peers by calling the game a "living case." Several students agreed that with less time on the game there would be more time for written responses which would force them to defend their analysis.

Student responses provided evidence in support of Dr. Feinblum's objectives being generally met. However, in both classes, student corrective critiques tended to focus on specific techniques, idiosyncratic behavior of the teacher, or classroom constraints, and not on case method. And, in both examples, praise for case method outweighed complaints. There were also common cautions against case method only courses, for instance one business student

advised "I don't think that I would like exclusive use of case method, I don't think that it is always applicable to every situation."

Similarities in Practice: In general, both teachers used written cases, provided related readings, and focused on classroom discussions. Analysis revealed (in both classes) a skewed distribution of teacher activity toward discussions. In both classes, even the lectures tended to be dominated by similar interactive discussions. In discussions, both teachers focused on generating open-ended dialogues. Further, both teachers reviewed previous topics from time to time during discussions, linking diverse ideas for application within the context of each case. Both teachers developed discussions by imagining aloud changes in the details of a case, by testing student responses under hypothetically different conditions or by demanding that students consider and defend their personal responses as if they were actually in the case. Finally, both teachers moved case discussions from a historical review of a real life incident to a contemporary, if not personal (student), view. One could interpret these techniques as aids in rendering each case more deeply embraced by the students.

There also was similarity in what constituted a case or a discussion issue. What tended to be analyzed and discussed were the problematics or issues in a case. Both professors paid attention to the details of a case, e.g., related court precedents or public schooling laws in the Education class, and corporate and industry statistics in the Business class. However, such details received minor attention when compared to attention devoted to issues. Both professors also spent little time on problem setting, as compared to problem solving. Problems typically represented ambiguous or multiplistic situations from real-life settings. An obvious effort was made by both teachers to choose or redefine these problematics so that they were: 1) relative to student experience, or perceived future experience; and, 2) were fluid and ambiguous, reflecting real life. Both teachers focused the students on the uncertain aspects of the case or the student responses. In sum, for both classes, learners were thrust into a state of uncertainty during the discussions which constituted a central part of the case method process.

During exit interviews, questions elicited student perspectives as to what made a case good or bad. Perhaps the most profound findings came from responses which focused on personal preferences. There were consistent threads of agreement. One Education student explained, "If you've experienced something like that it's more relevant." One Business student described their preference by comparing, "It is like Garrison Keillor's Prairie Home Companion show, I like to be swept up by the story, to picture myself in those stories." One informant added that a case is "enhanced by being engaging, participating in an emotional dimension." Another added that a good case is just like reading a good book, "If you're reading a mystery novel you want to read a Mickey Spillane because you know that Mickey sets up the story right. When he describes the street being steamy at night, you know you can see it, you can feel it."

In general, students required cases to be reflective of their own real life experiences, with sufficient details to get the feeling of life. Length did not seem to be a factor, as long as students felt direct relevance to personal experience or were "swept up" by the story, as if they were hypnotized into experiencing the case as deeply as or more intensely than life itself.

The final questionnaire, among other things, asked students to rate their course in relation to other university courses. The possible rating was a grade of E through A, which was converted to a 0 through 4.0 scale for reporting. The Education students unanimously rated this ethics course the highest, μ=4.0. Case method teaching also received a unanimous 4.0 rating from the Education students, in terms of teaching method effectiveness. The business respondents rated this course μ=3.37. Case method was rated highest, in terms of teaching methods. Simulation games were rated by the Business students as a mean of 2.87, but with a large standard deviation of 1.30. This finding may support the work done by Wolfe and Guth (1975), who noted that students who "win" simulation games tend to be more motivated than losers.

The responses to effective teaching methods can be seen in tabular form (Table 5).

Table 5 - Questionnaire responses for question number 13

13. Grade the following general teaching methods in terms of effectiveness for you.	Education		Business	
	μ	S.D.	μ	S.D.
a. Lecture/Discussion ----------	2.71	1.25	3.03	.87
b. Case Method ----------	4.0	0	3.05	.76
c. In class simulations (games) ----------	3.20	1.30	2.87	1.30
d. Initiatives (physical problems)----------	2.50	2.12	2.38	1.05
e. Field experience ----------	3.0	.71	3.03	.80
e. All other pedagogies ----------	3.0	.58	2.48	.82
Total number of respondents = ----------	7 (100%)		39 (80%)	

The questionnaire revealed that case method primarily helped the learner reflect on problem solving and decision making. This was more noticeable among the Business students than the Education students, as can be seen in Table 6. The question was designed to force respondents to choose the one area which case method helped them reflect on most. The design was not meant to measure the ability of case method to achieve each objective. Therefore,

findings from question number 11 are descriptive of students' major reaction to the content of their reflections and not a ranking of the different contents.

Table 6 - Questionnaire responses for question number 11

11. Case method helped me reflect on:	Education	Business
A. basic skills and knowledge	4%	22%
B. working in groups	20%	19.5%
C. problem solving and decision making	28%	48%
D. consequences of my actions	24%	6.5%
E. ethical purposes	24%	0%
Total number of respondents =	7 (100%)	39 (80%)

Students were asked to note what values the cases most closely resembled (Table 7).

Table 7 - Questionnaire responses for questions number 3-9, and 12

Questionnaire Responses	Education		Business	
	μ	S.D.	μ	S.D.
3. Rate the use of case method compared to other teaching methods used in this course:	3.86	.38	3.04	.67
4. Rate the use of case method compared to all other university teaching methods:	3.64	.48	2.92	.81
5. Rate your ability to cope with uncertainty, as a result of case method teaching:	3.71	.49	2.95	.76
6. Quality of the cases used in this course was:	3.86	.38	3.29	.72
7. Case methods used in this course for specific content knowledge:	3.83	.41	2.95	.83
8. Case methods used in this course for gaining problem solving skills:	3.71	.49	2.74	.85
9. Case methods used in this course for gaining a more reflective professional practice:	3.71	.49	3.19	.74
12. Rate this course in relation to your other university courses:	4.00	.00	3.37	.63
Total number of respondents =	7 (100%)		39 (80%)	

They were to choose from a list of value choices, including their own values, the instructor's values, occupational values, value free, or a mix of values. The most frequent choice by Education students was "a mix of values" (86%), with 14% choosing "a value free stance." Business students most frequently chose "a mix of values" also, but by only 46%. Their second choice (26%) was for "the instructor's values." "Occupational values" received 16%, "a value free stance" received 7%, and student values received 5% of the responses. The Education students did have a chance to write their own cases, and hear from Dr. Holmes as to his value stance, but they viewed the cases as holding a range of values to discriminate from. Dr. Feinblum ended discussions with his views, which may explain why his students felt the instructor's values were the second most often considered set. Observations revealed students in both classes cueing the professors to state their values, as if they were looking for "the right" values. Other cross-referencing questions:

Both teachers claimed their students achieved higher levels of learning from the case method. Both teachers employed inquiry models. Teacher behaviors generally were congruent with their stated objectives (affirmed by student responses). Both teachers tended to emphasize case discussions over other components of the method. The bulk of their observed behaviors surrounded questioning strategies during case (or lecture) discussions. Despite differences in practice, students from both settings tended to praise the method, regardless of differences or seeming shortcomings in delivery or reception.

The central question is, "Does the synthesized typology correspond to practice?" The answer is yes, but not in any static form. The data record depicts both professors moving through the synthesized typology in seemingly random rather than sequential patterns. Case content tended to dictate where in the typology the professors would begin, then student responses led them through various paths within the typology. Representation of each cell of the typology was found in practice, but mostly in general terms and in some instances in contradictory terms. All three methods were used, but not necessarily sequentially. For example, a teacher may have been operating with Case Method #II objectives and roles, but using a Case Method #I case. Thus, the typology became suspect in terms of its ability to accurately describe all practice.

The synthesized typology is based on three differing frameworks all of which have experiential epistemologies as common ground. Each of the three methods contains different objectives and thus different instructional strategies. However, the methods have as a core that the objectives are merely different levels of reflective and prospective practice, and all instructional strategies have the quality of experiential education (as opposed to didacticism or passive learning). Experiential philosophy, on which this typology is based, holds that reality is dynamic rather than static, is constantly unfolding, and that learning is contextual.

Therefore, it is important to experience what is considered known and effective, but in the context of a changing constructed reality.

In some instances, both instructors followed a progression from Case Method #I through Case Method #III, but that accounted for less than 50% of their case method use (actually less in the Education class). When it did occur, it tended to happen over time. An implicit proposition in the synthesized typology is that the three methods are, in fact, three levels of a hierarchy. The progressions observed appear to support a hierarchical view. However, analysis did not confirm this. The levels proved to be substantively different constructs, each of which was necessary for case method success and each of which was used without preference. It was evident that different case specifics might dictate differing methods, that student preference might cue different methods, or that teacher preference might dictate different methods. However, there does not appear to be any inherent superiority to any of the three case methods. There were no evidently superior levels of reflection or prospection, but merely different aspects of the same experiential goal: reflection/prospection-in-action.

The typology, viewed as static categories, did not describe the dynamic practices observed in this study. Rather, the idiographic portrayal of these two settings suggests an open-ended interpretation which supports the flexible, dynamic and variable nature of case method pedagogy.

Congruency between teacher claims and behaviors, or between claims from the literature and actual practice, also received consideration. The literature review indicated that researchers were interested in investigating the efficacy of case method teaching for academic achievement. Argyris (1980) noted that in the example he studied the practitioners failed to act congruently with their claims. In short, while the practitioners had claimed to use a Socratic approach which resulted in no single correct answer, Argyris found that in practice the teachers re-directed the students to answers the professors deemed correct after allowing students to think their own answers were acceptable.

As to the question of whether the practitioners performed as they claimed, my data from pre-course interviews concerning teacher objectives compared with stated beliefs with observed teacher behaviors or student reports, shows that both teachers did do as they claimed. However, the comparisons were not straightforward.

Coleman (1991) and Pearson (1982 and 1985) have looked more deeply at congruence. Pearson suggested that what looks like incongruency may be a shift in, or adherence to, a personal hierarchy of beliefs (1985, p. 131). In other words, the teachers may appear to behave in a manner which is incongruent when they shift behaviors from one objective to comply with some higher order objective. Coleman (1991) extended the congruence inquiry by considering a teacher's tacit knowledge of their "invisible world." For Coleman, congruency is

a question of relating behaviors to that invisible world rather than stated beliefs. These propositions suggested a closer look than Argyris' method had made.

Upon analysis, it appeared that congruency questions dissolved in the face of successful achievement of case method (typological) goals. The two practitioners demonstrated the ambiguous changing nature of real life in their teacher behavior as well as in the processing of cases. As long as students (and professors) were drawn into experiencing the cases deeply, struggling with the issues and resolving problems, they did not appear to view congruency of teacher behaviors with teacher claims or literature claims as a controversial issue. Analysis would then suggest that living the case was the active ingredient (both the top of belief hierarchies and the focus of invisible worlds) for success in these two case method pedagogies.

There was a notable difference between the two classes in what constituted a problem or an issue within a case. John Dewey, in How we Think (1933), described a problem as whatever shock or sudden change, no matter how subtle or ordinary in character, "perplexes and challenges the mind so that it makes belief at all uncertain" (p. 13). There appeared to be an attempt by both professors to provoke uncertainty in each case, yet the type of case problem differed. The Business course chose problems of a general or fundamental nature which captured organizational issues in business from detailed case histories. The Education course chose concrete educational experience as the main source of problems, from insufficiently detailed accounts of critical incidents. It is not clear if the lack of detail was purposive or happenstance, but the students often found the cases too vague. Case problems were either failures to resolve issues or successes to be understood, e.g., if an exemplar in a case had succeeded, the student was confronted with the challenge of reproducing that success in their own way, in new and different contexts.

Major differences between settings were size and structure of discussion groups, the Business unit not requiring written responses to cases while the Education unit did, and the Education unit required students to write cases while the Business unit did not. There were also differences in the interplay between case topics and teaching methods. The Business unit used many highly structured cases, professionally written by the Harvard Business School, which were presented sequentially (at times in developmental stages), versus a plan-as-you-go, less focused, organic case use in Education. The student cultures varied noticeably in that Education students were more engaged in abstract concepts (ethics) versus Business students who were more engaged with the "living case," as students described the simulation game. Further, the Business students came to this course with a tradition in case method studies, while many Education students had never experienced the methodology.

Thus, the typology predicted teacher roles and expectations well, but not case qualities or individual case method styles. Neither example focussed on case structure nor did they focus

intensely on student analyses or problem setting. It appeared that the choice of case topic more than case choice dictated method level.

It can be concluded: 1) that the case methods used were successful in spite of individual teaching styles and techniques, or other constraints, when the learner experienced the case deeply; 2) that case method pedagogy can be described in general terms which sufficiently separates the practice from other pedagogies; 3) that the typology did describe real practice, but through open-ended, dynamic categories which are not developmental in nature (thus the typology is not a stage theory); and, 4) that the new typology represents a philosophical position in educational theory that is discretely different from the contributing typologies.

Observations and informant retrospectives on successful examples did not demonstrate a clear connection to teaching technique. This interpretation led to two questions: 1) How did these students learn? and 2) How did these teachers teach successfully? The response to the first question is that students learned through being deeply engaged in the cases, the discussions, or their own internal felt difficulties with case-related problems. The response to the second question is that these teachers performed a reflective/prospective practice when successful, which, in these settings, was an ongoing, simultaneous integration of subject knowledge and situational knowledge, of content knowledge and common sense (practical wisdom). Teachers also required the condition of living in the case. With these conclusions, it would appear inaccurate to assume that teaching and learning within this pedagogical framework consists of a specific body of knowledge or skill which can be codified and examined. The phenomenon is too dynamic.

Induction into a Case: The key to success with cases appeared to be "living-in the case." This view posits the necessity for case methods to be experiential, or contextual, from case introduction through concluding discussions. "Experiential," in this instance, means internally experienced rather than hands-on, minds-on, or vicariously experienced. Students were induced into a direct experience, a rehearsal for real life experiences or a simulation of reality. This "pretend" experience was not passive, but deeply felt and problematic for the learner. The result was transient experiential learning among the teachers and their students.

Everything students do is an experience, but Dewey added a layer of definition which reminds us that experiences can either be educative, non-educative, or mis-educative. Instances which appeared to be more effective, or educative, were ones in which students had this "living" experience; in those instances neither teacher technique, teacher charisma, case structure, length of discussion, nor student background, had much apparent affect. This inference is grounded in the data of this study and may not be generalized to case method practice; however, it seems that a learner could attend a hands-on physical activity, going through the motions, without an educative experience, and the same mis-educative or non-

educative outcomes could occur in case studies. The conclusion is that educative, direct experience occurred when the learner (or teacher) was drawn into "living" the material. Max Van Manen (1977) pointed out that the word "experience" connotes "living through . . . . [or] partaking in a common meaning" (p. 217-18).

The condition of living in the case inductively appeared to be a result of inducement into and immersion in the case experience by the writing of the case, the questions posed, the quality of the discussion, the teacher dramatizing the issues in class discussions, student generated meaning, or the case's proximity to student experience. In short, once a case became lived-in, the method was successful.

One way to describe being induced into living in the cases is to compare the experience with an hypnotic induction. In a hypnotic induction, the client is induced into a trance in which the inner experience is deepened and becomes potentially more powerful than external experience. Perhaps the most effective learning condition was when the students experienced immersion early on. The best problems seemed to have structures similar to the students' current or near future, real-life problems.

Inducement into living in the case represents an experiential orientation hitherto undefined by case method practitioners or researchers. This pivotal experience is described as the deeply felt rehearsal and internal practice of professional artistry at levels of comprehension, problem solving, and judgement. The experience includes reviewing, reconstructing, reenacting, creating, analyzing, grounding, explaining and defending ideas and actions with imagined but lifelike material. This conclusion is what separates case method pedagogy, an experiential practice, from didactic or passive pedagogies.

To say that the typology corresponds to actual practice is oversimplifying, because the revised typology (Table 8) is constructed with open-ended claims and is therefore bound to correspond to a multitude of teaching practices.

Other internal structural changes to the typology have been made for correspondence to observed practices. The aim of case method pedagogy, described by the altered typology, is to provide direct experience of real life material in the classroom, which will lead to improved professional artistry. Categories have been changed (now called "tiers") to reflect the conclusion that case method pedagogy is not made up of three different methodologies. Rather, it is one methodology which can make use of many methods in any or all of the three tiers as the learning environment may dictate. What separates the tiers is not the aim of the pedagogy or a change in method, but the topic under study.

Case Method #I held as an objective what Schön (1983) referred to as "reflecting-on" something (basic skills or content knowledge). The Case Method Tier #I objective has been altered to "reflecting-in-action," or experimenting with a situation which ". . . is framed as a

Table 8 - Revised Integral Case Method Typology

	Educational Objective	Teacher's Role	Student's Role	Nature of the Cases
TIER #I Technical Rationality	Achieve application level skills and specific content knowledge necessary for developing professional artistry	Model effective skills and knowledge comprehension, provide inducement into an experience which uses basic skills and specific content knowledge, and visualize student success	Reflect and prospect in action and demonstrate knowledge of skills and basic precepts of the profession, retain meaningful content	Simple, usually short, complete and concise with little ambiguity but relevant complex details, which provide inducement into effective use of details
TIER #II Practical Action	Acquire general process skills for acting in complex settings	Model multiple processes for problem setting, problem solving and decision making. Facilitate group processes by providing inducement into the processes, and visualize student success	Reflect and prospect in action while working in groups on process skills, and applications in complex settings	Complex stories that define the boundaries of a real life, problematic event, and provide inducement into effective use of process skills
TIER #III Critical Reflection	Acquire understanding and ability to practice reflectively and prospectively, integrating specific knowledge with general or transferable skills	Model comfort with uncertainty, allow for personal interpretation, and facilitate the understanding of reasoned and ethical actions in ambiguous settings, and visualize student success	Reflect and prospect in action while constructing and defending analyses, implementation plans, consequences, and ethical or political purposes	Complex, incomplete stories that reflect real life ambiguous conditions and a wide range of philosophical and practical implications and provide inducement into wise action

problem of understanding something." (Schön, D., 1983, p. 268) such as why a traditional business process works or which facts are important and how they are best manipulated.

Reflection-in-action for Case Method Tier #I most often occurred with problems of basic skills or the problem of critically analyzing something (or as Schön put it, "making something").

Case Method Tier #II does not describe the learning of a pre-existing process like decision making or problem solving, but describes a method where students are required to develop their own processes which are expected to change and evolve. Students are also expected to question the time-honored assumptions and practices being studied while formulating their alternative hypotheses.

Case Method Tier #III is aimed at developing wisdom (see Dooley and Skinner's matrix), or critical reflection on problems of understanding ambiguous philosophical or ethical issues. If students show signs of developing personal artistry which integrates the variables of an ambiguous situation with progressive solutions, Tier #III success can be assumed. The typological proposition was that in order to learn basic skills and content knowledge, problem solving or decision making skills, or learning wisdom and artistry in case method, the required condition is living in the case.

None of the three contributing typologies (Dooley and Skinner's, Doyle's, or Zeichner and Liston's) predicted success under conditions of poor teaching, student apathy, or poorly written cases. This typology does, as long as inducement occurs, and thus is expanded to include the primary ingredient of living in the case. This study did not prove that the previous typologies were right or wrong, but that they needed to be more explicit about living in the case. The three contributing typologies each included didactic methods in their typology which is unwarranted by this data record; because, when living in the case was not present low levels of learning took place.

Argyris (1980) offered the same critique by suggesting a difference between single-loop and double-loop learning. His response was that single-loop outcomes should not be a focus of case method pedagogy. The data from this study concur with this idea, and assert that didactic approaches should not be considered a part of case method definition. Definitions will remain confusing if all approaches are allowed to be called case method pedagogy. Therefore, this study concludes that case method pedagogy should be defined purely as an experiential methodology.

Reflective practice. The teaching patterns observed in both professors were not uniform or predictable in any simple terms. Both professors responded to the subject matter, student diversity (in interests and capacities which dynamically changed over the semester), and personal objectives, with flexibility. What allowed these two professors to be flexible appeared to be reflective (and I would add prospective) practice.

Schön's (1983) ideas about reflecting-in-action correspond to practices observed, yet neither the teachers nor the students did reflect-in-action unless they were deeply experiencing

the case. Schön proposed that for reflection-in-action to occur, the learner must enter into a "transactional experiment." Key to this experiment was the learner, as Schön put it,

> What allows this to happen is that the inquirer is willing to step into the problematic situation, to impose a frame on it, and yet to remain open to the situation's back-talk. Reflecting on the surprising consequences of his efforts to shape the situation in conformity with his initially chosen frame, the inquirer frames new questions and new ends in view. (p. 269)

Schön asserts that the learner creates meaning in the process (which is prospective), and suggests that experience takes place as an experiment initiated by the willingness of the learner to begin inquiry.

This proposition is accurate as it was observed, but adds that some individuals appeared to come with more willingness (intrinsic motivation) than others and in some instances the case or the teacher supplied (extrinsic motivation) the initiating mechanism. The learner (both teachers and students) simultaneously appeared to experience history, present context, and the creating of a future. Living in the case then, is the reflective practice of interaction with the past, present, and future. The initiating mechanism for reflective practice to occur in these classes appeared to be a learner's felt difficulty (as Dewey often put it), a felt difficulty which could be realized via a range of internal or external motivators. These conclusions provide insight for the questions of teacher congruity.

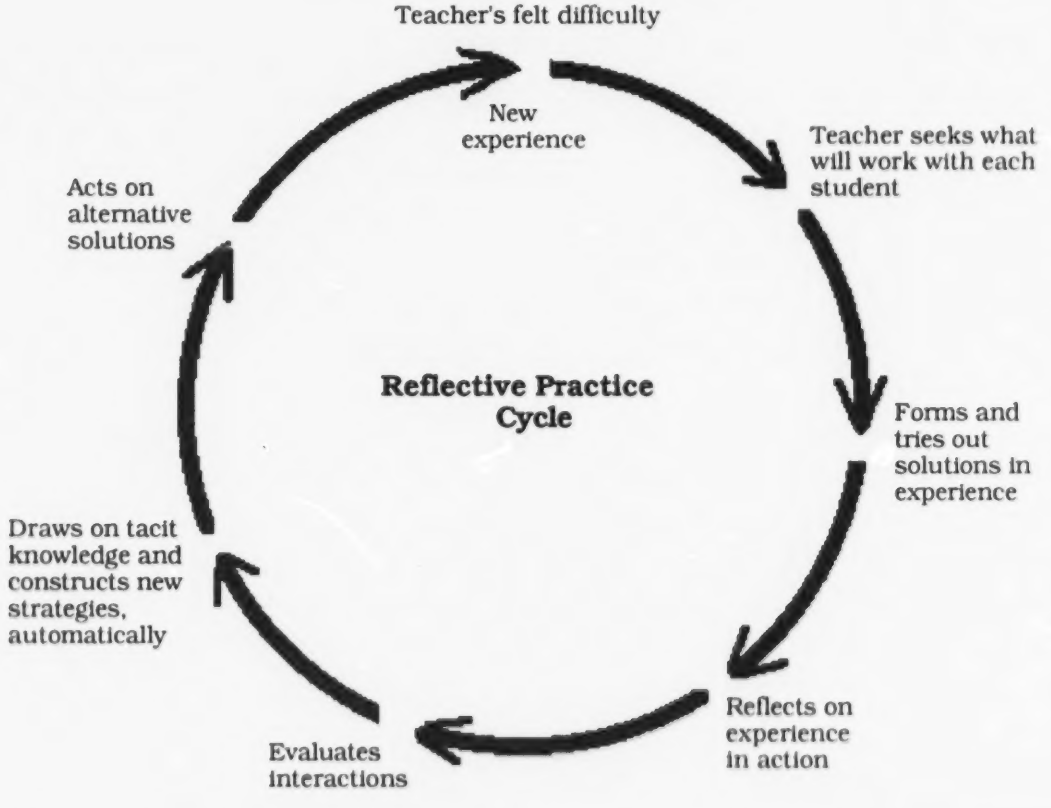
Argyris' work (1980) showed case method teachers who claimed open-endedness but provided students with their own sense of correct answers. His study focused on the incongruency between claims about the practice and actual behavior. He demonstrated that when teachers do not follow the method, i.e., do not remain Socratic, their shortcomings have a limiting impact on student learning (promoting dependence). To extend his work, the question became, how can there be successful case method teaching if teachers do not follow the method?

There appeared to be two reasons the professors were effective. First, the structure of case method, when cases were relevant, kept the students engaged in the interaction between theory and practice. Second, the process of case method kept the teacher engaged in the interaction between theory and practice. Learning seemed to take place, as Dewey and Schön argued, at the intersection. It is at the intersection that the teacher calls upon his artistry rather than a recipe or technique, and acts as a reflective/prospective practitioner. The data confirms Schön's constructivist framework concerning reflection in action; in that the practitioners' patterns of instruction, their styles of teaching, were not uniform or predictable but flexible and changing constantly.

Apparent contradictory behaviors began to be seen as adaptive behaviors, and required a different analysis. What appeared to be incongruency if viewed superficially, as Argyris did,

without context, or as contextual, which Pearson and Coleman suggested, was more probably a dynamic and systemic phenomenon (Figure 1) which integrated belief and action as complimentary change agents. Teacher change or development became a notion of practice as activity embedded within theory. The issue was not one of finding warranted or poor practices for case method. The issue was one of seeking understanding which would explain and help practitioners reflect-in-action and construct justifications for their practice in specific contexts. The case method style used with one group did not necessarily work with the other, and sometimes did not even work with the same group in another case.

Figure 1 - Reflective Practice Cycle


Teacher's felt difficulty
New experience
Teacher seeks what will work with each student
Forms and tries out solutions in experience
Reflects on experience in action
Evaluates interactions
Draws on tacit knowledge and constructs new strategies, automatically
Acts on alternative solutions
Reflective Practice Cycle

This cycle includes cause and effect connections, but within a cyclical pattern, as parts of a whole system. Argyris may have been viewing only one of these connections, and seeing it accurately from that limited perspective. Argyris (1980) did not find double-loop learning in his study. More contextual analyses may see several cause and effect connections and still miss a view of the whole system. This study not only found double-loop learning but what can be defined as infinite-loop learning, contextual learning, or continuous interdependent learning. This cycle, as observed in this study, appeared to be reinforcing, meaning that each

segment of cause and effect behaviors was reinforced by the previous segment. Therefore, the case method practitioners exhibited a constancy in change of behaviors, progressively adapting to the changing situations of the classrooms; learning from experience. This systems view has been used by Meadows, et al (1972), to describe biological and economic systems, but offers an alternative explanation of experiential learning. This infinite-loop model would see a positive reinforcing cycle as educative, a negative reinforcing cycle as miseducative, and homeostasis as noneducative.

Beliefs and actions of these two faculty were most congruent when they were at the theory/practice intersection. When cases were processed experientially they were thought to be successful, and the dynamic nature of experience left no finite criteria to be used as a measure to test congruency.

The two case method practitioners did not act incongruently with their stated beliefs. This conclusion implies that a teacher's tacit knowledge is not stagnant, which further implies that the actions of the teachers were driven by beliefs that may or may not have been hierarchical, but may have been changing. Many incongruities are then superficial, and when matched with deeper, dynamic beliefs it may be that disparate actions are not incongruent actions.

Speculations

There are several induction methods and potential impediments to consider. Case method practitioners would improve their practice with a focus on getting students to live in cases as the central aim of case method pedagogy. This condition is supported by the claims for case method efficacy and responds to the need for gaining situational and tacit knowledge. However, impediments may occur, or success may be diminished, if 1) cases are not relevant to the student's interest, 2) or do not relate to their personal histories, 3) if the student does not see the future importance of the case issues, or, 4) if the practitioner does not frame the case in a compelling fashion.

Generic issues presented in cases may allow students to encounter common problems from a safe distance, however, even these Tier #II cases require careful writing in order to draw in the learner. Some cases in this study, written poorly (in terms of induction), resulted in students finding related problems from their personal histories to focus on; to create an engaging experience. The implied risk is that depth in application abilities may be sacrificed for introductory knowledge gains, and that a student's intrinsic motivation to learn may be lost. Student initiated immersion is desired, a goal of inducement, but it is derailed if it is gained as a consequence of having students substitute their own experiences for overly boring cases.

Inquiry has been shown to be an important inducement method, but the case method practitioner skewing his or her focus toward discussions for this purpose may generate another impediment. When case method practitioners use discussion as their only strategy for obtaining success, control of outcomes remains largely in their hands. The implied risk is that teachers may become stuck with their own solutions, precluding dialogue. Clearly it is appropriate and necessary for a teacher to intervene for the students' benefit, but if the teacher is constrained by having to generate the bulk of inquiry it may be difficult to always think of the learner's need. Both professors in this study modeled an ability to separate student needs from student wants, resulting in generally effective interventions (mostly during discussions). However, in resolving this potential tension, case choice becomes very important. The implication is that practitioners should look for cases written in the most compelling style, with the greatest amount of alignment with professional needs and personal interest; inducing students to be deeply engaged and thus able to contribute more fully in the case process. The most compelling style used in this study was highly narative and metaphoric.

Research would do well to include the study of metaphor in cases. More than a sense of drawing analogies, when living-in-the-case, the method becomes a metaphoric process. The educative use of metaphor as a process, with related mythic structures, has been a concern of researchers for some time (Bacon, S., 1983; Campbell, J., 1949 and 1972; Gordon, D., 1978; Mac Cormac, E., 1985; Marshall, H. H., 1988; Schön, D., 1983; and, Taylor, W., 1984); however, this interest has not yet been extended to cases or case method teaching.

The three models of case method pedagogy described by the typology do not so much aim to describe three teaching methods as to orient three styles. Although the processes described in the three tiers are presented in sequence, and do represent a hierarchy of levels of complexity, they are not meant to represent fixed stages, phases, or developmental steps. The simplification of these three models is a legitimate way of highlighting what appeared to be important features of the case method practice. The aim is not to describe "ideal" teaching practices for practitioners to master; rather, it is to promote skillful use of a range of teaching techniques as means to a common end; the improvement of the professional practice of students in higher education. The attempt is to stretch standards, not to promote standardization.

At issue here is whether these features are indeed critical enough to guide case method practice, however, the inherent guidance is very open-ended and not likely to rigidify the practice. The three models aim to describe three continua for future exploration of the phenomenon. Practitioners must decide what is critical in terms of teaching strategies and educational goals. It would be undesirable for this typology to be translated into policy.

Policies have a way of fixing practice and of translating successes onto checklists for faultfinding evaluators. This results in the stifling of individual artistry.

An alternative view, posited in this paper, suggests a new metaphor for case method pedagogy: a conversation with reality. Rather than including the search for certainty of the banking concept (Freire, 1970), this view depicts case method as a hermeneutic process whereby the teacher and learners are actively induced into a conversation with some problematic uncertain aspect of professional reality.

This new metaphor is borrowed from Richard Rorty (1979), who suggested a similar paradigm shift for philosophers:

> If we see knowledge as a matter of conversation and of social practice, rather than as an attempt to mirror nature, we will not be likely to envisage a metapractice which will be the critique of all possible forms of social practice. (p. 171)

The hermeneutics that Rorty wants to use to explore knowledge is also used to justify his claim that philosophy is better described as a conversation seeking wisdom than as a search for certain epistemological foundations. It is beyond the scope of this paper to respond to such questions of epistemology; however, the data record supports this interpretation of case method pedagogy.

The typology promotes teaching as a craft or an art of conversation which concurrently addresses the teaching of basic skills, subject matter knowledge, problem solving processes, critical thinking skills, ethical (and perhaps political) deliberation, and the reflective/prospective practice or artful integration of the above arenas by students. Central to these concepts is the mistaken idea that learning subject matter should be viewed as an end in itself; rather, the typology suggests that learning to think and reason provides intrinsic meaning to learning specific subject matter and may be a prerequisite rather than a fringe benefit. The typology also suggests that no priority be given to either teacher-centered or student-centered goals. On the contrary, the analysis of these classes suggests that effective teaching integrated outcomes for teachers as well as their pupils.

Case method pedagogy must be re-framed as an experiential methodology, a conversation with reality which is a metaphoric process. Each learner must, by living in the case, confront their personal reality maps, integrate them with maps presented by the case, and then explain their evolutionary gains in the conversation. Theoretical constructs capable of this re-framing will require a radical empiricism, one which cannot trust even direct experience but can begin to grasp paradoxical phenomena. The aim of case method pedagogy to integrate theoretical and practical wisdom goes beyond metacognition, beyond logical reasoning, and beyond social or idiosyncratic construction to a concinnity–a synthesized, simultaneous act–a professional artistry.

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